

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/29/2008 has been entered.
2. All outstanding rejections, except for those maintained below, are withdrawn in light of applicant's amendment filed on 7/29/2008
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

***Claim Rejections - 35 USC § 112***

4. Claims 23-28, 35-41, 43, and 44 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With respect to claims 23 and 35, an amount of silica and carbon black of 30-50 phr (and 30-45 phr) fails to satisfy the written description requirement of 35 USC 112, first paragraph since there does not appear to be a written description requirement of the amount of 30 phr and 45 phr with respect to the sum total amount of silica and carbon black in the application as

originally filed, *In re Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989) and MPEP 2163.

While there is support for a combined amount of 15-50 phr when the amount of silica is not greater than or equal to the amount of carbon black in phr minus 5 phr on page 4, lines 1-4 of the specification, there is no support for the combined amount of 30-50 phr (and 30-45 phr) with no condition on the amount of silica with minus 5 phr. Case law holds that, with respect to changing numerical range limitations, the analysis must take into account which ranges one skilled in the art would consider inherently supported by the discussion in the original disclosure, *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). Applicant has cited Test 8 in Table 3 as providing support for an endpoint of 30 phr, however, the examples cannot be relied upon to teach an endpoint given that the examples is to a much narrower embodiment than what is claimed.

With respect to claims 24-28, 35-41, 43, and 44, they are rejected for being dependent on a rejected claim.

### ***Claim Rejections - 35 USC § 103***

5. Claims 23-26, 29-32, and 36-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '146 (JP 09-302146, machine translation) in view of Miyazaki (US 6,109,320).

JP '146 discloses a bead filler comprising 100 parts by weight (pbw) diene based rubber comprising predominantly natural rubber but also styrene-butadiene rubbers (paragraph 0009); 20-150 pbw silica having a surface area of 210-300 m<sup>2</sup>/g (abstract) (e.g. 200 and 230 m<sup>2</sup>/g, see Table 1); 0-50 pbw carbon black having a surface area 50-150 m<sup>2</sup>/g (paragraph 0010) (e.g., 83

$\text{m}^2/\text{g}$ , see Table 1); and 5-25 % based on the amount of silica (i.e., 1-37.5 pbw) silane coupling agent (abstract). In example 4 in Table 1, the composition comprises 50 pbw silica and 7.5 pbw coupling agent, which provides for a ratio of silane coupling agent to silica of 0.15/1.

JP '146 fails to (i) exemplify a composition comprising the amount of silica and carbon black like presently claimed and (ii) the structure of the bead filler.

With respect to (i), given that JP '146 teaches amounts of silica and carbon black that overlap with the presently claimed amounts, it would have been obvious to one of ordinary skill in the art to utilize amounts of each that read on the instant claims, absent evidence of unexpected or surprising results.

With respect to (ii), Miyazaki teaches that a bead filler is a reinforcing layer found axially outside the turnup portion of the carcass and extending radially from the bead core, i.e., bead wire (col. 2, lines 46-50).

Given that JP '146 teaches that its composition is used in a bead filler which reads on the presently claimed structure as taught by Miyazaki, it would have been obvious to one of ordinary skill in the art to obtain a pneumatic tire with the presently claimed structure from the teachings of JP '146.

6. Claims 27 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '146 (JP 09-302146, machine translation) in view of Miyazaki (US 6,109,320) and further in view of Takeichi et al. (U.S. 6,008,295).

The discussion with respect to JP '146 and Miyazaki in paragraph 5 above is incorporated here by reference.

JP '146 fails to disclose a diene elastomer with active groups like presently claimed.

Takeichi et al., which is drawn to rubber compositions for tires, discloses the use of silicon or tin halide modified diene elastomer in order to produce a composition with superior fracture properties and low hysteresis loss (col. 1, lines 19-22, col. 2, lines 34-55, and col. 6, lines 45-55).

In light of the motivation for using additional diene elastomer disclosed by Takeichi et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such diene elastomer in the tire of JP '146 in order to produce tire with superior fracture properties and low hysteresis loss.

7. Claims 28 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '146 (JP 09-302146, machine translation) in view of Miyazaki (US 6,109,320) and further in view of Fukahori et al. (U.S. 5,844,050).

The discussion with respect to JP '146 and Miyazaki in paragraph 5 above is incorporated here by reference.

JP '146 fails to disclose diene elastomer that has been modified by branching agent such as divinylbenzene.

Fukahori et al, which is drawn to rubber composition, disclose a diene elastomer comprising a majority of cis-1,4-bonds, which is branched using divinylbenzene (col.9, lines 4-14, 32 and 46-50) in order to produce a composition with good abrasion resistance, fatigue resistance, and tensile properties (col.25, lines 26-36).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use such diene elastomer in the tire of JP '146 in order to produce tire with good abrasion resistance, fatigue resistance, and tensile properties.

***Response to Arguments***

8. Applicant's arguments filed 7/29/2008 have been fully considered but they are not persuasive. Specifically, applicant argues that the presently claimed amounts of silica and carbon black provide for unexpectedly improved properties.

In response, the data of the specification has been fully considered, however, it is insufficient to establish unexpected results because the data is not a comparison to the closest prior art. Case law holds that comparative showings must compare the claimed subject matter with the closest prior art to be effective. See *In re Burckel*, 592 F.2d 1175, 1179, 201 USPQ 67, 71 (CCPA 1979). Specifically, the comparative examples do not contain relatively higher combined amounts of silica and carbon black, and no criticality has been established for the presently claimed amount over that disclosed by JP '146.

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

9/26/2008  
vr

/Vickey Ronesi/  
Examiner, Art Unit 1796